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ABSTRACT

This fact sheet offers general information about traumatic brain injury. Information includes a definition, incidence, individual characteristics, and educational implications. The fact sheet notes that the designation of traumatic brain injury as a separate category of disability signals that schools should provide children and youth with access to and funding for neuropsychological, speech and language, educational, and other evaluations necessary to provide the information needed for the development of an appropriate individualized education program. The fact sheet emphasizes the need for careful planning for school re-entry and offers suggestions for educators to work constructively with students with traumatic brain injury. A list of seven print resources and three organizations concludes the fact sheet. (JDD)

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General Information About

TRAUMATIC BRAIN INJURY

Definition

The regulations for Public Law 101-476, the Individuals with Disabilities Education Act (IDEA), formerly the Education of the Handicapped Act, now include Traumatic Brain Injury (TBI) as a separate disability category. While children with TBI have always been eligible for special education and related services, it should be easier for them under this new category to receive the services to which they are entitled.

Traumatic Brain Injury (TBI) is defined within the IDEA as an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child's educational performance. The term applies to open and closed head injuries resulting in impairments in one or more areas, such as: cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual, and motor abilities; psychosocial behavior; physical functions; information processing; and speech. The term does not apply to brain injuries that are congenital or degenerative, or brain injuries induced by birth trauma. *(U.S. Federal Register, 57*(189), September 29, 1992, p.44802)

Incidence

TBI is the leading cause of death and disability in children and adolescents in the United States. The most frequent causes of TBI are related to motor vehicle crashes, falls, sports, and abuse/assault. More than one million children sustain head injuries annually; approximately 165,000 require hospitalization. However, many students with mild brain injury may never see a health care professional at the time of the accident.

Characteristics

The National Head Injury Foundation calls TBI "the silent epidemic," because many children have no visible impairments after a head injury. Symptoms can vary greatly depending upon the extent and location of the brain injury. HOwever, impairments in one or more areas (such as cognitive functioning, physical abilities, communication, or social/behavioral disruption) are common. These impairments may be either temporary or permanent in nature and may cause partial or total functional disability as well as psychosocial maladjustment. Children who sustain TBI may experience a complex array of problems, including:

- *Physical impairments:* Speech, vision, hearing, and other sensory impairment; headaches; lack of fine motor coordination; spasticity of muscles; paresis or paralysis of one or both sides; seizure disorders; and balance and other gait impairments.
- *Cognitive impairments:* Short- and long-term memory deficits, impaired concentration, slowness of thinking, and limited attention span, as well as impairments of perception, communication, reading and writing skills, planning, sequencing, and judgment.
- *Psychosocial, behavioral, or emotional impairments:* Fatigue, mood swings, denial, self-centeredness, anxiety, depression, lowered self-esteem, sexual dysfunction, restlessness, lack of motivation, inability to self-monitor, difficulty with emotional control, inability to cope, agitation, excessive laughing or crying, and difficulty relating to others.

Any or all of the above impairments may occur to different degrees. The nature of the injury and its attendant problems can range from mild to severe, and the course of recovery is very difficult to predict for any given student. It is important to note that, with early and ongoing therapeutic intervention, the severity of these symptoms may decrease, but in varying degrees.

Educational Implications

Despite the high incidence of TBI, many medical and education professionals are unaware of the consequences of childhood head injury. Students with TBI are too often inappropriately classified as having learning disabilities, emotional disturbance, or mental retardation. As a result, the needed educational and related services may not be provided within the special education program. The designation of TBI as a separate category of disability signals that schools should provide children and youth with access to and funding for neuro-psychological, speech and language, educational, and other evaluations necessary to provide the information needed for the development of an appropriate individualized education program (IEP).

While the majority of children with TBI return to school, their educational and emotional needs are likely to be very different than they were prior to the injury. Although children

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with TBI may seem to function much like children born with other handicapping conditions, it is important to recognize that the sudden onset of a severe disability resulting from trauma is very different. Children with brain injuries can often remember how they were before the trauma, which can result in a constellation of emotional and psychosocial problems not usually present in children with congenital disabilities. Further, the trauma impacts family, friends, and professionals who recall what the child was like prior to injury and who have difficulty in shifting and adjusting goals and expectations.

Therefore, careful planning for school re-entry (including establishing linkages between the trauma center/rehabilitation hospital and the special education team at the school) is extremely important in meeting the needs of the child. It will be important to determine whether the child needs to relearn material previously known. Supervision may be needed (i.e., between the classroom and restroom) as the child may have difficulty with orientation. Teachers should also be aware that, because the child's short-term memory may be impaired, what appears to have been learned may be forgotten later in the day. To work constructively with students with TBI, educators may need to:

- Provide repetition and consistency;
- Demonstrate new tasks, state instructions, and provide examples to illustrate ideas and concepts;
- Avoid figurative language;
- Reinforce lengthening periods of attention to appropriate tasks;
- Probe skill acquisition frequently and provide repeated practice;
- Teach compensatory strategies for increasing memory;
- Be prepared for students' reduced stamina, and provide rest breaks as needed; and
- Keep the environment as distraction-free as possible.

Initially, it may be important for teachers to gauge whether the child can follow one-step instructions well before challenging the child with a sequence of two or more directions. Often attention is focused on the child's disabilities after the injury, which reduces self-esteem; therefore, it is important to provide opportunities for success and to maximize the child's strengths.

Resources

Begali, V. (1992). *Head injury in children and adolescents: A resource and review for school and allied professionals* (2nd ed.). Brandon, VT: Clinical Psychology Publishing Company, Inc.

Cutler, B.C. (1993). *You, your child, and "special" education: A guide to making systems work.* Baltimore, MD: Paul H. Brookes Publishing Co. (Telephone: 1-800-638-3775.)

Gerring, P.J., & Carney, J.M. (1992). *Head trauma: Strategies for educational reintegration.* San Diego, CA: Singular Publishing Group, Inc. (Telephone: 1-800-521-8545.)

Lash, M. (1992). *When your child goes to school after an injury.* Boston, MA: Exceptional Parent Press.

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Savage, R. (1988). *An educator's manual: What educators need to know about students with TBI.* Washington, DC: National Head Injury Foundation, Inc. (See address below.)

Tucker, B.F., & Colson, S.E. (1992). Traumatic brain injury: An overview of school re-entry. *Intervention in School and Clinic, 27*(4), 198-206.

Organizations

National Head Injury Foundation
1776 Massachusetts Avenue, NW, Suite 100
Washington, DC 20036
800-444-6443 (Family Helpline); 202-296-6443

Epilepsy Foundation of America
4351 Garden City Drive, Suite 406
Landover, MD 20785
301-459-3700; (800) 332-1000

THINK FIRST Foundation
22 South Washington St.
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For more information contact NICHCY.

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Información General Sobre

LESION CEREBRAL

Definición

Los regulaciones de la Ley Pública 101-476, el Acta para la Educación de los Individuos con Discapacidades (IDEA), anteriormente el Acta para la Educación de los Impedidos (EHA), ahora incluye la Lesión Cerebral como una categoría aparte. Los niños con Lesión Cerebral siempre han sido considerados elegibles para recibir los servicios a los cuales tienen derecho, pero bajo esta nueva categoría el proceso será más fácil.

La Lesión Cerebral se define en IDEA como una herida adquirida por el cerebro, la cual es causada por alguna fuerza física externa que resulta en una discapacidad funcional total o parcial o un impedimento psicológico, o ambos, que afectan adversamente el rendimiento académico del niño. El término se aplica a las heridas abiertas y cerradas, las cuales resultan en impedimentos en una o más áreas, tales como la cognición; idioma; memoria; atención; razonamiento; el pensamiento abstracto; criterio; la solución de problemas; las habilidades sensoriales, motrices, y de la percepción; el comportamiento psicosocial; las funciones físicas; el procesamiento de información; y el habla. El término no se aplica a las lesiones cerebrales congénitas o degenerativas, o a las heridas cerebrales inducidas por trauma durante el parto. (*Federal Register, 57*(189), septiembre 29, 1992, pág. 44802)

Incidencia

Las lesiones cerebrales son la principal causa de la muerte y discapacidad en los niños y adolescentes en los Estados Unidos. Las más frecuentes causas de las lesiones cerebrales son los accidentes automovilísticos, las caídas, los deportes, y el abuso o asalto. Cada año, más de un millón de niños experimentan lesiones cerebrales; unos 165.000 requieren hospitalización. Muchos alumnos con lesiones cerebrales no ven a un profesional cuando ocurre el accidente.

Características

La organización National Head Injury Foundation ha calificado las lesiones cerebrales como "la epidemia silenciosa," porque después de la herida, muchos niños quedan sin impedimentos visibles. Los síntomas pueden variar dependiendo de la gravedad y ubicación de la herida. Sin embargo, los impedimentos en una o más áreas (tales como el funcionamiento cognoscitivo, las habilidades físicas, comunicación, o desorganización social o de la conducta) son comunes. Estos impedimentos pueden ser temporáneos o permanentes, y pueden causar discapacidades funcionales totales o parciales, además de mal ajuste psicosocial. Los niños que hayan experimentado una lesión cerebral pueden exhibir una variedad de problemas, incluyendo los siguientes:

- *Impedimentos físicos* - el habla, visión, audición, u otro impedimento sensorial; dolores de cabeza; falta de coordinación motriz; espasticidad de los músculos; paresis o parálisis en uno o ambos lados del cuerpo; desórdenes o ataques de apoplejía; e impedimentos en el balance o en el modo de andar.
- *Impedimentos cognoscitivos* - déficit de la memoria; debilitaciones en la concentración; pensamiento lento; atención limitada; impedimentos en la percepción, comunicación, y destrezas para leer y escribir, planificación, lógica, y juicio.
- *Impedimentos psico-socioemocionales y de la conducta* - fatiga, mal humor, contradicciones, el egocentrismo, las ansiedades, depresión, autoestima, disfunción sexual, inquietudes, falta de motivación, dificultades con el control emocional, la inhabilidad para hacer frente a los problemas, agitaciones, risa o llantos excesivos, y falta de habilidad para relacionarse con los demás.

Cualquier o todos de estos impedimentos pueden ocurrir a diferentes niveles. La naturaleza de la herida y los problemas que la acompañan pueden variar de leve a severo, y el curso de la recuperación es difícil de predecir. Es importante notar que, a través de la intervención terapéutica, temprana y contínua, la severidad de estos síntomas puede disminuir, pero a diferentes niveles.

Efectos en la Educación

A pesar del alto índice de lesión cerebral, muchos profesionales en los campos de la medicina y educación no están al tanto de las consecuencias de las lesiones cerebrales que ocurren durante la niñez. Los alumnos con lesión cerebral quedan equivocadamente calificados como niños con problemas de aprendizaje, trastornos emocionales o retraso

mental. Como resultado, es posible que los servicios educacionales o servicios relacionados no sean provistos dentro del programa de educación especial. La designación de lesión cerebral como categoría aparte indica que las escuelas deberían proveer a los niños y jóvenes el acceso a fondos para evaluaciones neuropsicológicas, educacionales, y del habla e idioma, entre otras necesarias, para desarrollar un programa educacional individualizado (IEP).

El hecho de que el niño se haya recuperado lo suficiente como para regresar a la escuela no quiere decir que el niño haya recuperado toda su capacidad anterior a la herida. Aunque los niños con lesión cerebral pueden demostrar una conducta similar a la de los niños que hayan nacido con otro tipo de condición o discapacidad, es importante reconocer que los efectos repentinos causados por el trauma son muy diferentes. En muchos casos el niño con lesión cerebral puede recordar como era antes del trauma, lo cual puede resultar en muchos problemas emocionales y psicosociales, diferentes a los que típicamente se encuentran en los niños con discapacidades de orígen congénito. Además, el trauma puede impactar sobre la familia, amigos, y profesionales que recuerdan como era el niño antes de la herida y que pueden tener dificultad al cambiar y ajustar sus metas y expectaciones.

Entonces, para satisfacer las necesidades del niño es muy importante planificar cuidadosamente su regreso a la escuela. También será importante determinar si el niño necesita aprender de nuevo la materia que estudió previamente. Es posible que el niño necesite supervisión (para ir desde el salón de clases hasta el baño, por ejemplo), ya que puede tener dificultad para orientarse. Los profesores deben estar al tanto de cómo la memoria del niño puede quedar impedida, todo lo que aparentemente haya aprendido en un día puede olvidársele más tarde. Para trabajar constructivamente con alumnos con lesión cerebral, los educadores deberán:

- Darle al alumno oportunidades para repetir y un ambiente consistente;
- Enseñar y demostrar nuevos trabajos, darle instrucción, y proveer ejemplos para ilustrar ideas y conceptos;
- Evitar el uso de expresiones figurativas;
- Animar al alumno a medida que vaya mejorando su concentración;
- Explorar con frecuencia la adquisición de habilidades y proveer oportunidades para la práctica;
- Enseñar estrategias compensatorias para aumentar la memoria;
- Estar preparado para la falta de vigor que es típico de los alumnos con lesión cerebral y proveer períodos de descanso como sea necesario; y
- Mantener el ambiente libre de toda distracción.

Es posible que al principio los profesores tengan que medir si el niño puede seguir instrucciones simples antes de darle instrucciones complicadas. A veces se enfoca toda la atención en las discapacidades del niño, lo cual puede reducir su autoestimación; por lo tanto, es importante aumentar las oportunidades para el éxito y llevar hasta el máximo las potencialidades del niño.

Recursos

Begali, V. (1992). *Head injury in children and adolescents: A resource and review for school and allied professionals* (2nd ed.). Brandon, VT: Clinical Psychology Publishing.

Gerring, P.J., & Carney, J.M. (1992). *Head trauma: Strategies for educational reintegration.* San Diego, CA: Singular Publishing Group. (Teléfono: 1-800-521-8545.)

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Savage, R. (1988). *An educator's manual: What educators need to know about students with TBI.* Washington, DC: National Head Injury Foundation. (Ver dirección más abajo.)

Organizaciones

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